

An Actuarial Opinion

by Mark Birdsall

**Story Submitted for the
10th Speculative Fiction Contest**

**Sponsored by
Society of Actuaries
Actuary of the Future, Forecasting & Futurism, and
Technology Sections**

© 2013 Society of Actuaries, All Rights Reserved

The opinions expressed and conclusion reached by the authors are their own and do not represent any official positions or opinion of the Society of Actuaries or its members. The Society of Actuaries makes no representation or warranty to the accuracy of the information.

An Actuarial Opinion

Mark Birdsall, FSA, MAAA

The Senator walked briskly along the passageway, his personal bodyguard on his left, his personal actuary on his right. He stopped for a moment at the door of the villa. Will the President allow us enough time to explain this? he thought to himself.

Inside the villa, the President was anxious about the next meeting, wondering whether this was going to be a waste of time. Would this have any effect on her decisions? .

The Senator reluctantly knocked on the villa door, which was answered by a Secret Service Agent. Invited inside, the personal bodyguard remained outside the door while the Senator and his actuary entered. The President called to the entry way to invite them into the large sitting area where a large ViewPad was set up for use by the actuaries in their discussion. As they entered the room, the President's actuary, Jason Plumb, closed the ViewPad screen and turned to shake hands with the visitors.

As everyone sat down around a large, circular table, the President commented, "Senator, I'm surprised you didn't bring all three of your actuaries. We have plenty of room for them here."

"Madame President, I cannot over-emphasize the need for the confidentiality of these discussions. Until some decisions have been made, the less people that know what our projections contain, the better."

"Senator, you know I am very skeptical of behavioral models. I have asked Jason here to help me evaluate your results as objectively as I can, but I can't see that your results are going to help me make decisions if I don't believe them."

"Thank you for your candor, Madame President, but these results have been carefully tested and are very important, as you will see. Tricia, will you describe the model and the results?"

Tricia handed a small chip to Jason who ran through several test protocols on his personal Surface before handing it back to Tricia Blaine for insertion into the ViewPad. As the data was loaded, Tricia turned to the group and said, "What I am about to show you is based on data as of last Friday night. As you know, the Federal Information Office has been collecting U.S. company data for several years in the hope of building a model showing intercompany connections in the financial sector. Modeling these interconnections could give us an early warning of the risk of too much interdependency among financial institutions creating a possible 'domino scenario.' Just last year, international company data related to private hedging transactions, reinsurance treaties,

and over the counter currency transactions have been added to the data available for our modeling work."

"So, have you found something new that alarms you?" asked Jason.

"In the past, we have focused mostly on developing predictive models for counterparty risk in hedging and reinsurance transactions. However, with the data we now have, we have begun looking at predicting demand for various financial products, such as longevity insurance and catastrophe insurance. One of our actuaries has begun predicting the demand over time for certain assets, such as Treasury securities, corporate bonds, and hedging instruments."

"You haven't answered my question," Jason stated. "Why is this important to us?"

"Our models show that the demand for the dollar and for Treasury securities is going to collapse, probably in the next 12 to 24 months."

"What!?" said the President. "You have come to me with a doomsday prediction? How can I take this seriously?"

"In developing our demand models, we have gone through a rigorous stage of modeling other models-in other words, calibrating our model results with those of many other forecasters, even those with groups like the IMF. As a result, we can predict with great accuracy the predictions that these forecasters are going to make before they make them. We have better data access than most of them and we obtain the data more quickly."

"So? Are these other forecasters predicting a collapse of the demand for the U.S. dollar and Treasuries?"

"Not yet. But, during the next period of time our models show they will reach a consensus prediction that the U.S. economy will steadily shrink over the next 25 years and that China, India, and Brazil will all have much larger economies than the U.S. at the end of that time. Based on our demand models, once those predictions reach a consensus level relatively few investors are going to want U.S. dollars and we may not be able to finance our Treasury debt or our corporate debt either, a triple whammy."

Jason asked, "Let me make certain I understand. You are predicting the consensus predictions of other forecasters?"

"Yes, the timing of the consensus has the most uncertainty. We believe this consensus will be reached within a 6 to 24 month window. We do have some time to take action first."

The President stood up and walked up to the ViewPad shaking her head, "What could we possibly do in six months to prevent such a disaster?"

The Senator stood. It was his turn now. "Change the rules of the game."

The President turned to look at the Senate Majority Leader. "What rules and which game?" she asked.

"We have the beginnings of a plan, but it will involve working very closely with the American Academy of Actuaries and asking for their time commitment to support a special modeling project. The solution will need to involve creating some new asset categories and policy actions that will not fit nicely into the current forecasting models. This will buy us some time. But fundamentally, we need to affect the trade imbalances between the U.S. and the rest of the world. That is the game that needs to be fixed. That will be where the Academy will focus its efforts."

"Will it work?" asked the President.

Jason Plumb stood to join the others by the ViewPad. "Madam President, we have been talking about setting up an actuarial think tank for years. Now would be a good time to fund it. Liberally."